

The Role of Children's Media Use in Teacher-Child Relationship, Classroom Adjustment and Performance When Transit to Primary School

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Abstract

Early transition from preschool to primary school is an important predictor that gives a lot of insight into the later years of formal schooling. In this process, teacher-child relationship is a determining factor on social and academic success when children make an attempt to adjust to the school environment. The major purpose of the study was to examine the teacher-child relationship in children's media use with a focus on the teacher-child interaction, classroom adjustment and performance. Correlation and regression analyses were used to identify these variables. Participants were 250 children (N=250, 121 girls, 129 boys) across the first year of primary school. 250 families as well as the teachers of children were surveyed on the children's media use and teacher-child relationship. Correlation analyses indicated that the quality of teacher-child relationship was linked to children's media use. Key findings suggest that the longer the media is used by a child, the less likely he/she is to interact with the teacher. What's more, the more the teacher assigns assignments through the mobile phone or tablet, the less child admires the teacher, which as well could reduce the class satisfaction via teacher-child interaction in sequence. Additionally, this study also indicates that media assignments by teachers is a new risk factor of negative relationship via teacher-child interaction.

Keywords: children's media use, transit to primary school, teacher-child relationship, classroom adjustment and performance

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1. Introduce

Starting school is a milestone for all children, and their early years transition predicts later school success (Gutman, Sameroff, & Cole, 2003; Jacyntha Krakouer, Pru Mitchell & Jenny Trevitt, 2017; Entwisle & Alexander, 1998; Pianta, Cox, Taylor, & Early, 1999; Claessens, Engel, & Curran, 2013; Morgan, Farkas, Hillemeier, & Maczuga, 2016). When children first step foot into their formal schooling classrooms, they are often entering a new world that entails various relationships (such as peer relationship, teacher-child relationship) and expectations (Kupersmidt & Coie, 1990; Verschueren & Koomen, 2012; Acquah, Palonen, Laine & Lehtinen, 2014). Gaining a greater understanding of the effect that the quality of these relationships has in children's lives can be a useful way to begin establishing high-quality relationships and provide positive outcomes for children (Rudasill & Rimm-Kaufman, 2009; Ariana Pavelka, 2016).

Increasing attention is being given to the children's transition from preschool to primary school under the ecological-contextual models (Bronfenbrenner, 1977; Pianta & Walsh, 1996; Pianta, R. C., & Stuhlman, M. W. 2004; Pianta, R. C., Steinberg, M., & Rollins, K. 1995; Bronfenbrenner & Morris, 2007). According to the bioecological model, children gain development within interrelated systems that exist at levels proximal and distal to them, which occurs in the way of continuous interactions between children and contexts (Bronfenbrenner, 1977; Pianta & Walsh, 1996), the various factors are in a network of mutual influence, the influence of a factor in one system can't be evaluated without consideration of factors in the other systems (Bronfenbrenner, 1977; Pianta & Walsh, 1996).

1.1 Teacher-child relationship

Children develop attachment relationships with teachers predict late performance and achievements (Hamre, B., & Pianta, R., 2001; Pianta, 1994; Ladd & Burgess, 2001; Birch & Ladd, 1997). Earlier research has documented that high-quality teacher-child relationships are positively related to a wide range of academic and social-emotional outcomes (Ponitz, C. C., Rimm-Kaufman, S. E., Grimm, K. J., & Curby, T.

W.,2009;Luckner&Pianta,2011;Pianta,1999), as well as to school adjustment (Pinata&Steinberg,1992). Relationships between teachers and children are performed in a relatively complex system which is based on various factors,such as the context of the relationship,the child's home environment,the attachment patterns that child and teacher has developed (Sameroff,1995;Pianta,Hamre,&Stuhlman,2003). Moreover,children may be able to develop different relationship types with teachers that are different from the relations they have formed with their parents.which may have unique and important implications for children with poor parent-child relationships (Howes,C.,Galinsky,E.,Kontos,S.,1998;van IJzendoorn et al.,1992). Children's environment is a critical factor when examining the teacher-child relationship which taken place through various interactions between teacher and child from kindergarten through 6 grade (Jerome,Hamre&Pianta,2008). Pianta (2002) found that SES and race are possible factors which affecting the teacher-child relationship.For example,children from families with lower SES and maternal education are likely to performed less positive in the classroom and their study is more teacher-directed (Pianta et al.,2002). Gender has been reported to linked to teacher-child relationship.for example,boys are typically experience more conflict and less closeness compared with girls (Ladd et al.,1999; Saft&Pianta,2001).

A broad range of environmental factors (i.e.,parenting style,peer group) have been proved to affects children's relational behavior in school,in return influencing the quality of relationships that children form with teachers.For example,Children are well cared for in a high-quality home environment, and they also get a high-quality care experience in school, which also results in high-quality teacher-student relationships (Jerome,Hamre&Pianta,2008;National Institute of Child Health and Human Development Early Child Care Research Network,1997).

All the findings highlight the importance of teacher-child relationships on the children's development, and more attention needs to be devoted to the continued exploration of the relevance of these relationships.Based on the above theory and research,though various studies have illuminated predictors of teacher-child relationship quality in early years from the perspective of cognition, few have explored it from the relevance-theoretic perspective in mid-childhood,the present study therefore aims to gain a better understanding of the teacher-child relationship in children's media use with a focus on the teacher-child interaction,classroom adjustment and performance when transit from preschool to primary school.

1.2 Children's media access and use in China

China is a late comer on the research on children's media access and use.Starting in the 1980s, which can be divided into two phases.The first stage was from the 1980s to the end of the 1990s. With the rapid spread of television nationwide, the influence of television on children has become a hot spot of concern for the whole society. Issues of concern at this stage include:

- 1.The type of TV program, the time and frequency of viewing, and the difference between TV media and print media (Buo Wei, 1991, Dream Circle, 1997).
- 2.The motivation of children's media use, parental involvement, etc (Wu Wei, 1993, 1996).
- 3.Research on the impact of television on children, including the impact on children's health, morality, psychology, development, gender roles, and social attitudes and behaviors (Yang Zidi, 1985;Bu Wei, 1994, 1997, 1999;Yuan Chunqing, 1995).

In the second stage, from the beginning of the 1990s and after entering the 21st century, the media ownership rate of urban families among children in China continued to rise. Owing to the support of the National Social Science Research Fund and cooperation with other subject projects, the research on children's media has made a comprehensive breakthrough in two aspects.

On one side, the scope of the study has expanded, which including children's media use in the amount of time, genre, frequency and individual differences.

The other side,regarding the content, it involves from television to computers, game consoles, etc (Chen Shuo, 2009; Lin Pin, 2009; Zhang Xinqiu, 2010).

The mass media is characterized by its generalized dissemination,openness, diversity and entertainment,It has played an active role in promoting emotional regulation of children in rural areas (Zhang,2008), diversifying children's personality and self-determination of values (Wang Yan, 2001; Han Ying, 2007) . However, Wang Gang also pointed out that the media mimetic environment is adultized, as well as the adultization of TV program content, misleading on the values of fame, fortune, money, and consumption, which has a negative impact on children's psychology (Wang,2008). Li Qi(2013)conducted a study on the children's media use and TV preferences in Shandong Province (aged from 0 ~12) .In this study,the children displayed age differences on TV viewing time, motivation of TV viewing, and their personal preferences for content and type.

1.3 The present study

The present investigation (1) examined the correlation between children's media use and teacher-child relationship. (2) examined the impact of different media types on teacher-child relationships. (3) described the levels of association of children's media use with teacher relationships. (4) examined the potential trends in the impact of

children's media use on teacher-child relationships. Based on the previous study on the quality of relationships between teacher and children and factors that contribute to these relationships, the hypotheses were made as follows:

1. There will be a correlation between children's media use and teacher-child relationship. Based on the research discussed above, we expect that when children enter to school, the amount of time children use media is related to the different types of relationships they have developed with their teachers.
2. Children's media use to different media genres have different effects on children's teacher-child relationship. We expect that children's use of different media is associated with various types of relationships between teachers.
3. Children's gender differences in media use have different effects on their teacher-student relationships. Based on previous findings that gender is linked to teacher-child relationship (Ladd et al., 1999; Saft & Pianta, 2001). We expect that gender differences in children's use of media are also reflected in differences in their impact on teacher-student relationships.

2. Methods

A sample of 250 first grade children (N=250, 121 girls, 129 boys) as well as their parents and teachers were participants in this study. Questionnaires were analyzed by SPSS 25.

3. Measures

1. General media use questionnaire

It contains 30 questions for children and family. Items of TV, mobile phone, tablet and computer are included.

2. Teacher-Child Rating scale (T-CRS)

This scale is composed of 12 items and is answered using a Likert type 4-point scale (1 = behavior never occurs, 4 = behavior almost always occurs). The T-CRS was designed to assess the school behaviors of young children, such as their social and emotional adjustment at school ((STRS; Pianta, R.C., & Steinberg, 1992; Perkins & Hightower, 2002). The scale consists four domains of interactions and behaviors between teachers and children, it evaluates the teacher's feelings and beliefs about the children's actions toward him or her. Sample items are: 'He/she has a satisfying relationship with me (teacher). He/she is willing to take the initiative to contact with me (teacher).' The reliability of this scale is $\alpha = .854$. The higher the score on this variable the more positive a teacher is about the student-teacher relationship.

1. Intimate teacher-child relationship

2. Avoiding teacher-child relationship

4. Results

Descriptive Statistics

Table 1

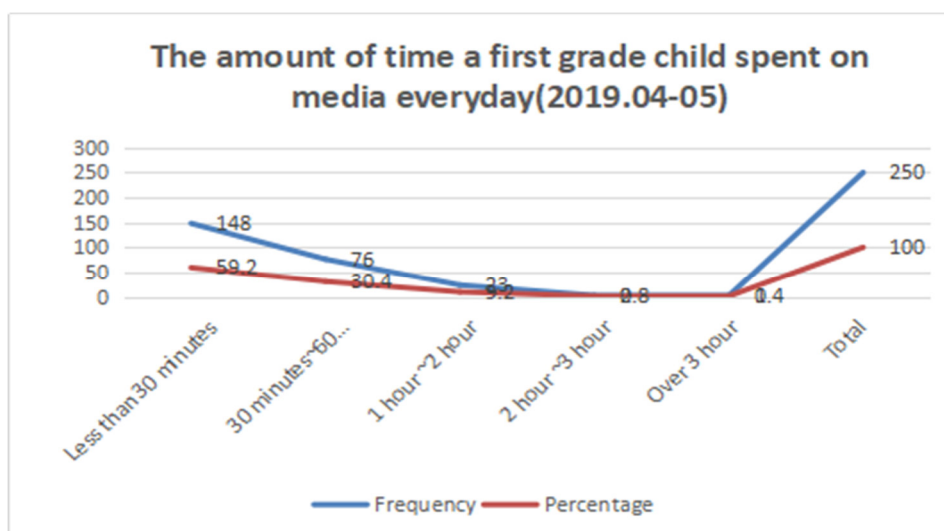


Table 1 shows that there are 59.2% of the children in first grade spent less than 30 minutes on media use per day, 30.4% of children spent 30~60 minutes one day, and 9.2% of them spent 1~2 hours on media everyday.

Table 2 T- test for gender differences in amount of time of media use

	Levene's Test for Equality of Variances		t-test for Equality of Means			
	F	Sig.	t	df	95% Confidence Interval of the Difference	
					Lower	Upper
How much time did you spend on media use every day?	0.729	0.394	1.806	248	-0.019	0.437
Equal variances assumed						
Equal variances not assumed			1.81	247.993	-0.018	0.436

t test was conducted for gender difference in the amount of time of media use. $t=1.806$ ($P>0.05$) shows no significance on the gender on the media use when the children at first grade.

Table 3 Correlations among variables

	1	2	3	4	5	6	7	8	9
Teacher-child interactions									
1.Intimate teacher-child relationship		-.161*	.329**	.434**	-.418**	.297**	-.234**	.352**	-.347**
2.Avoiding teacher-child relationship	.495**		-.433**	-.367**	.564**	.224**	.464**	.263**	.387**
3.classroom adjustment	.517**	-.207**		.581**	-.663**	.321**	.261**	.211**	.351**
4.academic performance	.643**	-.300**	.456**		-.529**		.351**	-.414**	.188**
Children's media use									
5. The amount of total time in media use	-.418**	.564**	-.663**	-.529**		.119*	.244**	.375**	.199**
6.The content of TV program	.297**	.224**	.321**	.229**	.139*		-.141*	-0.093	-0.055
7.the amount of TV watching time	-.234**	.278**	.464**	-.277**	.159*	.414**		0.032	0.025
8.the amount of time in mobile phone use	.352**	.263**	.211**	-.414**	.126*	-0.093	0.032		.123*
9.the amount of time spent in internet(PC,tablelet)	-.347**	.387**	.351**	.188**	.199**	-0.055	0.025	.123*	
* $P<0.05$,** $P<0.01$ m,*** $P<0.000$.									

The total time of children's media use showed a significant correlation with intimate teacher-child relationship($r=-.418$, $P<0.01$), avoiding teacher-child relationship($r=.564$, $P<0.01$),classroom adjustment($r=-.663$, $P<0.01$) and academic performance($r=-.529$, $P<0.01$).

Among the scales,intimate teacher-child relationship includes for example,he/she is willing to talk to the teacher,He/she fully trusts his/her teacher,He/she worships the teacher.Avoidance teacher-child relationship includes he/she runs away from the teacher,he/she doesn't listen to the teacher.There is a significant correlation between the amount of time of children's media use and teacher-child relationship.

As table 3 shows,there is also a correlation between the classroom adjustment ($r=-.663$, $P<0.01$),academic performance($r=-.529$, $P<0.01$) and media use(the amount of time).

Table 4 Correlations between children watching TV and teacher-child relationship

TV watching	1	2	3	4	5	6	7	8	9	10
1.Types of TV program										
2.Frequency of watching TV										
3.Time period for watching TV(time slot)										
Variables										
4.He/She is liked by teacher.		-.136*	-.112*	.053						
5.He /she can concentrate in class.		-.388**	-.177*	-.114						
6.He/she admires the teacher.		.054	.030	.073						
7.He/she has a sense of belonging to the class.		-.201**	.054	.015						
8.He/she trusts the teacher.		-.175**	.043	.071						
9.He/she is willing to take the initiative to contact with the teacher.		-.238**	-.055	.034						
10.He/she wants to be praised by the teacher.		.147*	.033	-.029						

*P<0.05, **P<0.01m, ***P<0.000.

According to table 4, children spent the time on the types of TV program is related to teacher-child relationship and classroom performance. As shown in the table 4, there is a negative correlation between the TV program watching and the child is liked by teacher ($r = -.136, P < 0.05$), he/she has a sense of belonging to the class ($r = -.201, P < 0.01$), he/she is willing to take the initiative to contact with the teacher ($r = -.238, P < 0.01$), He/she trusts the teacher ($r = -.175, P < 0.01$), he/she can concentrate in class ($r = -.388, P < 0.01$). Also, the frequency with which children watch TV is related to whether they can concentrate in the classroom ($r = -.177, P < 0.05$) and whether they are liked by the teacher ($r = -.112, P < 0.05$). Regarding the time period for watching TV, there is no significant between teacher-child relationship, classroom adjustment and the time slot that when children watch TV.

From the above data results, we can see that the frequency and content of children watching TV is related to teacher-child relationships and classroom adjustment, but not to time slot.

Table 5 Correlations between children's mobile phone use and teacher-child relationships and classroom adjustment

	1.Make calls or text message	2.Play games	3.learning tools
He/she has a sense of belonging to the class.	-.012	-.126*	.352**
He/she is willing to take the initiative to contact with the teacher.	.060	-.158*	-.165**
He/she admires the teacher.	-.045	-.127*	-.559**
He /she can concentrate in class.	-.036	-.481**	-.172**
He/She is liked by teacher.	.009	-.164**	.324**

*P<0.05, **P<0.01m, ***P<0.000.

Table 5 indicates that children use mobile phones for different purposes, they have different association with teacher-child relationships and classroom adjustment. Calling or texting with a mobile phone was not significantly related to the teacher-child relationship at school and classroom performance, While Playing games on mobile phones has a significant negative correlation with them. The most relevant is the child's inability to focus on the classroom ($r = -.481, P < 0.01$). In using a mobile phone as a learning tool, it is positively related to the child's sense of belonging in the classroom ($r = .352, P < 0.01$) and he/She is liked by teacher ($r = .324, P < 0.01$), while it is significantly negatively related to children worship/admire teachers ($r = -.559, P < 0.01$), and negatively related to he/she is willing to take the initiative to contact with the teacher ($r = -.165, P < 0.01$). meanwhile, it is negatively related to he/she can concentrate in class ($r = -.172, P < 0.01$).

Table 6 Regression analysis of children's media use and worship teachers

Model		SS	df	MS	F	Sig.
1	Regression	3.741	1	3.741	4.436	.036 ^b
	Residual	209.159	248	.843		
	Total	212.900	249			

a. Dependent Variable: He/she admires the teacher.

b. Predictors: (Constant), How much time did you spend on media use every day?

Table 7 Coefficients

Coefficients ^a							
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
1 (Constant)	4.536	.161		28.221	.000	4.219	4.852
How much time did you spend on media use every day?	-.134	.063	-.133	-2.106	.036	-.258	-.009

a. Dependent Variable: He/she admires the teacher.

Regression analysis was performed for children's media use and worship teachers, as it shows above, $F(1,248)=4.436, p=0.036<0.05, \text{Beta}=-.133(t=-2.106, p=0.036)$, children's media use time can predict the worship of teachers, which indicates that the longer a child uses the media, the less likely he / she will admire/worship the teacher.

Table 8 one-way ANOVA test

ANOVA					
Relationship	SS	df	Mean Square	F	Sig.
Between Groups	78.570	1	78.570	1.523	.218
Within Groups	12791.030	248	51.577		
Total	12869.600	249			

A one-way ANOVA was conducted for children's gender differences in media use (the amount of time) have different effects on their teacher-student relationships. According to table 8, $F=1.523, p=.218>0.05$, the test results shows that there is no significant gender difference in the impact of children's media use time on teacher-child relationships.

5. Discussion

The primary purpose of this study was to examine associations between children's media use and teacher-child relationships from preschool through first grade and classroom adjustment at first grade. The literature indicates that high-quality teacher-child relationships are associated with long-term development and achievement; however, the effects of other environmental factors (like media environment) on the association between relationship quality and achievement have not been evaluated. To understand more fully the impact of quality of teacher-child relationships on children's school adjustment and achievement, relationships must be studied in the ecological context (Pianta & Walsh, 1996).

Results from this investigation indicates significant association between children's media use and teacher-child relationships. Firstly, the total amount of time used by children's media was significantly correlated with intimate or avoiding teacher-child relationships. Specifically, the frequency and content of children watching TV is related to teacher-child relationships and classroom adjustment, but not to time slot, these findings suggest that interventions focused on improving children's relationships with teachers should pay attention to the contents of TV programs and the reasonable frequency for children to watch TV.

The findings regarding the correlation between children's media use and worship of the teacher indicates that teachers' use of mobile phones, computers, and tablets to assign assignment is also a potential risk factor for increasing children's use of media. As a result, children's worship of teachers is reduced, which can hinder the relationship between teachers and children, which can also lead to poor classroom adjustment and performance (Eisenhower, Baker, & Blacher, 2007; Pianta, & Stuhlman, 2004; Pianta, 1999).

The quality of the teacher-child relationship has been found to be related to teachers' expectations and children's performance and background (Gingles, & Price, 1993; Pianta, R., Stuhlman, M., 2004b.). Previous literature has demonstrated that students' behaviors and learning motivation in the classroom have an impact on teachers' expectations for their future academic performance (Cooper, H., Findley, M., & Good, T., 1982; Hecht & Greenfield, 2002), in return teachers' expectations can affect the subsequent teacher's behavior and student performance (Hamre, B.K., Pianta, R.C., Burchinal, M. et al, 2012; Ready & Wright, 2011). The results of this study indicated that the longer a child uses the media, the less likely he/she will admire/worship the teacher, which in line with the previous study about the ecological context (Bronfenbrenner, 1977). A possible explanation for this finding is that the teacher expects different academic performance according to the classroom behavior of the children, and hopes to achieve it by assigning homework at different levels. In this process, children's use of media has a new impact on the teacher-child relationship.

6. Educational Implications

The current findings have implications for teacher education programs. Positive teacher-child relationships predict children's social and academic development. (Baker,2006;Pianta,Steinberg,& Rollins, 1995; Valiente, Lemery-Chalfant,Swanson, & Reiser, 2008;Hamre& Pianta,2001). From this study, however, it gives a insight for elementary school teachers how to foster high-quality relationships with children.This research demonstrates that teachers use the media (e.g.,use tablet or phone)to assign assignments to improve students' academic performance while at a risk in turn become a stumbling block to high-quality teacher-child relationships.

The results of the current study open important pathways for future research into the question: what is the association between children's motivation for media use and teacher-child relationships. For example,do children use the media because of avoiding the teacher, or because of low self-identity in the class, or because the use of various media lead to alienation from the teacher? Are there certain factors to be influenced by media use when it comes to formulating high quality teacher-child relationship? And if that is the case, this research could be extended with an investigation of how children's media use with different contents and motivation be a modulator between child temperament and teacher-child interaction in classroom.

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